



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO.   |
|---|-------------|----------------------|----------------------------|--------------------|
| 09/801,699  | 03/09/2001  | Jun Amako            | 108850                     | 3250               |
| 25944   | 7590        | 01/27/2004           |                            |                    |
| OLIFF & BERRIDGE, PLC<br>P.O. BOX 19928<br>ALEXANDRIA, VA 22320 |             |                      | EXAMINER<br>HUYNH, LOUIS K |                    |
|   |             |                      | ART UNIT<br>3721           | PAPER NUMBER<br>18 |

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/801,699

**Applicant(s)**

AMAKO ET AL.

**Examiner**

Louis K. Huynh

**Art Unit**

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 6 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 16.                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Withdrawal of Indicated Allowable Subject Matter*

1. The indicated allowability of claims 1-3 and 7-12 is withdrawn in view of the newly discovered reference, JP 63-278353, submitted by Applicant on October 16, 2003. Rejections based on the newly cited reference follow.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 7 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by JP'353 (JP 63-278353).

With respect to Claims 1 and 13, JP'353 discloses a method for sealing a package including: providing a case (8) housing an electronic device (3), and a lid (9) made of transparent material; interposing a bonding member (9a) between the case (8) and the lid (9); and irradiating the bonding member (9a) with a laser beam through the lid to melt the bonding member to bond the case (8) and the lid (9) to each other with the intervention of the bonding member (9a) (see English Translation at page 5, lines 11-22).

With respect to Claim 2, the bonding member (9a) is formed on the lid (9) and the bonding member (8a) is formed on the case (8) in the method of JP'353.

With respect to Claim 3, fixing by pressure the case to the lid is an inherent step because the case and the lid must be held against each other in a predetermined position prior to

irradiating the bonding member. For example, the case and the lid are fixed to each other by pressure in the embodiment of Fig. 1 (see English Translation at page 4, lines 12-14).

With respect to Claim 7, spot welding in the method of JP'353 is a scanning process since the bonding member is irradiated point by point (see English Translation at page 5, lines 18-21).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'353 (JP 63-278353) in view of Sasagawa (US 6,008,914).

The method of JP'353 meets all of applicant's claimed subject matter but lacks the specific teaching of the laser beam being projected through a phase hologram to generate a diffraction light pattern so that the bonding member is irradiated at a time as a whole.

However, Sasagawa teaches a method of simultaneously generating a plurality of laser beams using a phase hologram (5) to simultaneously transfer images at predetermined position on a work piece (8) to be machined so that the time required for machining is reduced (col. 4, lines 50-62).

JP'353 teaches that any irradiating means can be used for irradiating the bonding member; therefore, it would have been obvious to a person with an ordinary skill in the art, at the time the invention was made, to have modified the method of JP'353 by having provided a phase

Art Unit: 3721

hologram, as taught by Sasagawa, for generating a diffraction light pattern corresponding to the pattern of the bonding member so that the generated diffraction light pattern could irradiate the bonding member disposed on the pellicle frame at the same time thus reducing the time required for irradiating the bonding member.

With respect to claim 9, adjusting the order of the diffracted light energy is well known in the optical art; therefore, it would have been obvious to a skilled person in the art to have the diffracted beams reversed in the zero-th order.

With respect to claim 10, Sasagawa discloses a condensing lens (7) and the phase hologram (5) is disposed between the condensing lens (7) and the work piece (8). Therefore, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have modified the method of JP'353 by having provided a condensing lens, as taught by Sasagawa, in order to focus the laser beam onto the phase hologram.

6. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'353 (JP 63-278353) in view of Yen et al. (US 5,772,817).

With respect to Claim 11, the method of JP'353 meets all of applicant's claimed subject matter but lacks the specific teaching of a step of monitoring the temperature distribution over the bonded portion of the case and the lid during the laser irradiation of the bonding member.

However, Yen et al discloses a method of sealing a lid (14) to a case (12) using a CO<sub>2</sub> laser beam to irradiate a bonding member (19) disposed between the case and the lid; wherein the temperature distribution over the bonding member is monitored to maintain a low

Art Unit: 3721

temperature to partially melt the bonding member without breaking the lid (column 5, lines 51-55).

Therefore, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have modified the method of JP'353 by having provided a step of monitoring the temperature distribution over the bonded portion of the case and the lid during the laser irradiation of the bonding member, as taught by Yen, in order to maintain a low melting temperature of the bonding member.

With respect to Claim 12, the method of JP'353 meets all of applicant's claimed subject matter but lacks the specific teaching of a step of preheating the bonding member before the bonding member is irradiated with the laser.

However, Yen et al discloses a method of sealing a lid (14) to a case (12) using a CO<sub>2</sub> laser beam to irradiate a bonding member (19) disposed between the case and the lid; wherein the case with the bonding member is baked in an oven in order to dry the bonding member before the bonding member is irradiated (column 5, lines 27-29).

Therefore, it would have been obvious to an ordinary skilled person in the art, at the time the invention was made, to have modified the method of JP'353 by having provided the step of preheating the bonding member, as taught by Yen, in order to dry the bonding member prior to irradiating the bonding member so that the time require for melting the bonding can be reduced thus shorten the overall bonding process.

***Allowable Subject Matter***

7. Claims 5 and 6 are allowed over the prior art of record.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1-3, and 7-13 in Paper No. 13 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on October 16, 2003 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

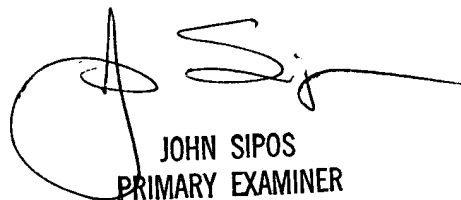
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis K. Huynh whose telephone number is (703) 306-5694. The examiner can normally be reached on M-F from 9:30AM to 5:00PM.

Art Unit: 3721

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I. Rada can be reached on (703) 308-2187. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

LH  
January 16, 2004



JOHN SIPOS  
PRIMARY EXAMINER